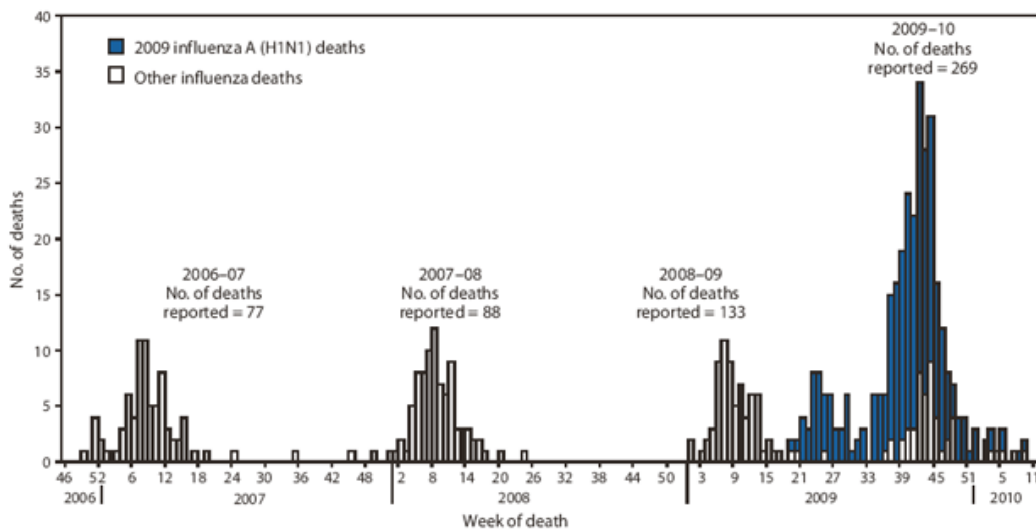


Don't throw away your H1N1 vaccine yet



<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5914a3.htm>

During the last year we witnessed something remarkable in our pediatric practices from which I hope we will remember some lessons: **An influenza pandemic**. The fact that the death toll from influenza was no more than an average year belies the large impact on children and young adults from the influenza pandemic. Influenza deaths fall 2009 to spring 2010 in pediatric age group <18 y were estimated 1000 to 2000 --- the greatest number ever, with 269 actual reports to CDC of pediatric H1N1 influenza deaths. We know how busy we were with critically ill hospitalized young people during the peak of the pandemic in October. Deaths in all age groups were 10,000 to 15,000, as the elderly were relatively spared because of immunologic memory from experience with H1N1 outbreaks in the 1950s, and perhaps because of the tremendous precautions implemented during the 2009 pandemic. Immunization against H1N1 took a bite out of the epidemic curve after its peak.

Our local experience from southwest Idaho was everything you can imagine from influenza:

- The largest number of suppurative complications of respiratory infections we have ever seen at one time followed on the heels of influenza infections. This finding is exactly what medical historians tell us about serious infections in young people during the 1918 influenza pandemic. At St. Luke's Children's Hospital, we had three orbital abscesses in one month, and seven empyemas requiring chest tubes in one weekend! The bacteria responsible were high-grade pathogens group A Strep, pneumococcus, and Staph aureus including MRSA.
- Quite a number of infants were hospitalized with acute respiratory distress due to H1N1, and we learned how to use oseltamivir as directed by a CDC "Emergency Use Authorization". I think all these infants did just fine nevertheless.
- Some children experienced mild influenza followed by a variety of prolonged medical complications, including chronic fatigue syndrome, airway dysfunction, pancytopenia, autoimmune thyroiditis, and other post-infectious conditions that specialists are dealing with nine months after the peak of the pandemic.

Right now, most Americans are still susceptible to H1N1 influenza. An estimated 40 to 80 million people experienced infection, and approximately 120 million people were immunized. The implications for the upcoming influenza season are uncertain to speculative at best. The title of this article refers to the possibility that we may still use our unexpired H1N1 monovalent vaccine if an influenza outbreak begins at the end of the summer before trivalent vaccine for 2010-2011 is available. In the upcoming trivalent vaccine, the 2009 pandemic strain H1N1 replaces the previous H1N1 pre-pandemic strain. If you like technical stuff, the composition of the upcoming trivalent vaccine is A/California/7/2009 H1N1, A/Perth/16/2009 H3N2, and B/Brisbane/60/2008 Victoria lineage B.

How we did delivering influenza vaccine in fall 2009 is in the eye of the beholder. CDC estimates that 30% of Idaho children 6 months to 17 years received influenza vaccine, compared to 40% of all US children. We certainly had challenges immunizing the most medically high-risk young children in our own practices. If the use of vaccine had been left up to pediatricians in their own clinics, most pediatricians think they could have been wiser than the health department authorities prioritizing vaccine use.

Healthcare workers should be setting the example for the public by stepping forward to get influenza vaccine. Instead we debate the need for immunization mandates for hospital employees.

Local pediatricians vary in review of school-based immunizations. The current ACIP recommendation is for influenza immunization to include everyone over age 6 months. I am certain we cannot pursue a goal of universal influenza immunization of children without school-based immunization programs. The logistics of our practices dictate that a high proportion of our patients will not get vaccine in our clinics during the window of time that influenza vaccine is available. I think we should encourage school-based immunizations. I am impressed that schools overcame consent procedures and fear of liability last fall even if the availability of vaccines at schools was limited.

You ask what are the lessons that I hoped we would remember. This too depends upon whom you ask, and whether they view the cup half-full or half-empty. Are we prepared for disasters? Is our vaccine delivery system a broken hodge-podge of overlapping half-measures? Did you note that some pediatric clinics made no effort to offer H1N1 vaccine? What is your conclusion from what you saw last fall?

---Tom Rand MD PhD